Recovery from Training and Games

Whenever a player trains or takes part in a game, energy is used, water is lost and microscopic damage occurs to muscles. All of these occur naturally. If the body recovers fully after each session, the training that is undertaken will result in improvements in performance. However, if the body does not adequately recover, the player will become fatigued quicker during the next session, and if this continues there will be a decrease in performance. Remember, improvements due to training do not occur during training — they occur when the body can properly recover and adapt to the training stimulus.

The importance of adequate recovery from training and games cannot be overemphasised. Building periods for recovery into a training programme is as important as incorporating proper progression.

Recovery involves a number of different factors:

- Replacing fluids and energy,
- Reducing muscle damage and
- Reducing psychological symptoms of fatigue, such as anxiousness and irritability.

When should recovery begin?

Adequate recovery begins long before the players leave the playing area or gym — it starts during the session. By trying to maintain proper hydration during training or games, players can reduce the amount of dehydration they will experience. Sipping 125 — 250ml of water or a sports drink every 15 — 20 minutes can keep fluid levels topped up during activity.

All training and games should finish with a proper cool down taking place over 10 — 20 minutes. The cool down must incorporate activity of a progressively lower intensity to help speed the removal of lactic acid from the muscles and blood. Stretching exercises are an important aspect of all cool downs.

The Warm Up and Cool Down

- Replacing Fluids and Energy

Replacing the energy used during exercise and the fluids and electrolytes lost through sweating is important within the first 2 hours after completing training or a game. During the cool down and stretching, water, sports drinks and fruit should be available to players to begin this process.

Drinking 500ml of a sports drink immediately after training or a game will help replace lost fluids and also replenish used energy stores. A sports drink containing a source of vitamin C, vitamin E or protein is useful to repair muscle damage. If the sports drink does not contain protein eating a small snack, such as a chicken or turkey sandwich at this time will also be useful.

Knowing how much fluid is lost will provide a good indication of the level of fluid intake required by each player. There are a number of different ways of assessing a players hydration status, however a simple method is to weigh a player before and after training and games. The weight difference is the amount of fluid lost from the body through sweating. Ensure that the player is wearing as little clothing as possible each time you weigh him. Remember for each 1Kg of weight lost, 1.5 litres of fluids must be consumed.

Water is fine for most people after exercise, as long as it is accompanied by a meal or snacks to provide for carbohydrate and electrolytes used during exercise. However, if a player does not feel like eating solid foods in the hours after exercise, it is important to drink fluids containing other nutrients such as a sports drink, milk drink or smoothies.

Protein and carbohydrate are essential nutrients for recovery. The meal or snacks consumed after training or games should contain a source of each. A snack such as a chicken and salad roll (white bread) is a good option. Fruit, dried fruit/almonds and museli bars are other alternative snacks after training or a game.

The meal eaten in the hours after exercise can make a big difference to recovery, and should contain a source of protein (such as chicken, turkey, tuna or lean beef) and carbohydrate (such as potatoes, pasta, rice or noodles), but not too much fat. Good examples include:

- Beef and vegetable stir-fry with rice or noodles
- Pasta with chicken or lean meat tomato sauce, add vegetables or serve with salad

- Chicken and vegetable risotto
- Grilled chicken with vegetables (including potato/pumpkin)
- Home-made pizza (low-fat cheese and lean ham)
- Soup with pasta/noodles/rice and meat/chicken/legumes

Dont forget to have a large drink with this meal, and sip fluids regularly during the hours after training and games. Fruit should always be available to players to snack on.

Complete recovery is not achieved in just a few hours after the game, it can often take more than 24 hours. Adequate fluid and food intake is important over the next couple of days to ensure optimal recovery and preparation for the next game ahead!

- Reducing Muscle Damage

Muscle damage occurs naturally in each training session and game. Often the damage is microscopic, with the effects not being felt for up to 48 hours (often called Delayed Onset Muscle Soreness, or DOMS).

Cooling the muscles after exercise is a good way to reduce muscular damage and soreness, with there being a number of different options for coaches to condider:

    - Contrast Recovery (Hot/Cold)

This involves submersion or covering the body in hot (must be bearable to the individual) water, followed by the same with cold water (with a temperatute of approximately 15°C if possible). The guidelines for this are two minutes hot, followed by 30 seconds cold. This is repeated two-four times (as necessary).

    - Cold Immersion

This is similar to above except it is just cold immersion. The guidelines for this form of training are 30 seconds – 1 minute immersion, followed by 1 minute out of water (towel dry). Repeat this three times.

    - Ice Massage

This form involves ‘rubbing’ the muscle groups which have been trained, with ice. This can either be done with ice in a plastic bag, or a cooling bag. The

guidelines for this are one minute on one minute off, for a total of four minutes on each area/limb.

Make sure that you keep the ice moving over your skin, do not keep the ice stationary for any period of time as ice can burn! If you have any circulatory or sensory (e.g. paraesthesia) problems please check with your doctor.

Extreme care must be taken when using these, as some players may be very sensitive to extreme changes in temperature and may find the experience of going from a warm environment in the training area or dressing room into a cold shower or ice bath painful, or may go into shock. Always check how a player responds to cold before use. Careful monitoring of players at this time is advised.

It is always advisable to consult a doctor before introducing such regimes into the post training or game practice.

- Reducing psychological symptoms of fatigue

Many players complain of being mentally fatigued after training or games, or show symptoms of anxiety or irritability in the hours and days after a particularly tough training session or game. It should be noted that getting adequate sleep is a major part of ensuring recovery. Some players require more than others, but players should be encouraged to report if they have difficulty sleeping.

Ensuring that players are properly recovered before undertaking the next training session or taking part in the next game requires careful monitoring. Providing players with a training log, such as the one available in the Recovery from Exercise factsheet, and incorporating adequate hydration monitoring, will help to ensure that players are properly recovered. The training log will also help to identify early warning signs of under recovery.